DMITRIYEVSKAYA, N.P., inzh.

Illumination of textile industry enterprises. Svetotekhnika 5 no.10:1-4 O '59. (MIRA 13:2)

1. Ivanovskiy nauchno-issledovatel'skiy institut okhrany truda Vsesoyuznogo tsentral'nogo soveta profsoyuzov.
(Textile factories--Lighting)

KUTANIN, Anatoliy Fedorovich; KASHIN, Vatslav Aleksandrovich; SMIRNOV, Gennadiy Nikolayevich; DMITRIYEVSKAYA, Nina Petrovna; PUZYREV, A.V., kand.tekhn.nauk, red.; SOROKIN, N.S., retsenzent; SHUB, L.S., retsenzent; VERBITSKAYA, Ye.M., red.; VINOGRADOVA, G.A., tekhn.red.

[Safety measures in dying and finishing shops] Tekhnika bezopasnosti v krasil'no-otdelochnom proizvodstve. By A.F.Kutanin and others. Moskva, Izd-vo nauchno-tekhn.lit-ry RSFSR, 1961. 147 p. (MIRA 14:12)
(Textile industry--Safety measures)

DMITRIYEVSKAYA, Nina Petrovna; ZAYCHIKOVA, Valentina Alekseyevna; ZATEVKOVA, Tamara Grigor'yevna; MESHKOV, V.V., doktor tekhn. nauk, prof., red.; KUZNETSOVA, N.I., red.; ANDREYEVA, L.S., tekhn. red.; KOROBOVA, N.D., tekhn. red.

[Lighting in the enterprises of the textile and clothing industries] Osveshchenie predpriiatii tekstil'noi i shveinoi promyshlennosti. Pod red. V.V.Meshkova. Moskva, Profizdat, 1962. 285 p. (MIRA 16:6)
(Factories--Lighting)

DMITRIYEVSKAYA, N. V.

PA 3/50T68

USSR/Medicine - Amylase, Alpha- 1 Aug 49
Anaerobes, Thermo-
phyllic

"Some Properties and Active Groups in Preparations of Thermophyllic Anaerobes of Alpha-Amylase," N. I. Proskuryakov, N. V. Dmitriyevskaya, Inst of Pat, Moscow State U imeni M. V. Lomonosov, 3½ pp

"Dok Ak Nauk SSSR" Vol LXVII, No 4

Describes method of preparing a dry enzyme from a culture of the thermophyllic anaerobe, Clostridium Pasterianum. Discusses relation of its activity to temperature, to concentration of organic mercury compound used as an inhibitor, and to time of a

3/50T68

USSR/Medicine - Amylase, Alpha- 1 Aug 49
(Contd)

citrate action. Data established its high amylolytic activity, relation of its thermostability to presence of hydrocarbon components, and fact that it belongs to sulfhydril group of enzymes.

Submitted by Acad A. I. Oparin 6 Jun 49.

3/50T68

DMITRIYEVSKAYA, O.I.; SOKOLOV, N.M.

Ternary reciprocal system of sodium and potassium propionates and nitrates. Zhur. ob. khim. 28 no.11:2920-2926 N '58.
(MIRA 12:1)

1.Smolenskiy gosudarstvennyy meditsinskiy institut.
(Alkali metal nitrates) (Propionic acid)

5.4200

77343
SOV/79-30-1-4/78

AUTHORS: Dmitriyevskaya, O. I., Sokolov, N. M.

TITLE: Ternary Interacting System of Sodium- and Potassium Isobutyrates and Nitrates

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 20-25 (USSR)

ABSTRACT: The known experimental data on various ternary interacting systems leave an impression that heteroionic compounds occur when an aliphatic acid with a branched carbon chain is one of the components. The other components can be represented by any Na or K salts. The authors seek to substantiate this concept. They carried out experiments using recrystallized and chemically pure samples of commercial Na and K nitrates and isobutyrates. The mp of $NaNO_3$, KNO_3, iso-C_3H_7COONa, and iso-C_3H_7COOK are 308°, 337°, 260°, and 356° C, respectively. The first compound undergoes phase

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transition in solid state at 270° C; the second at 124° and 316° C; the third at 67°, 91°, and 220° C, and the fourth at 208°, 273° and 348° C. Binary systems $NaNO_3$ - iso-C_3H_7COONa; iso-C_3H_7COONa - iso-C_3H_7COOK; and $NaNO_3$-KNO_3 are known. The pair, iso-C_3H_7COOK - KNO_3, studied for the first time, proved to form a heteroinonic compound of iso-$C_3H_7COOK \cdot KNO_3$ composition when mixed at intermediate ratios (Fig. 1). Heteroionic compounds are also formed in binary systems KNO_3 - iso-C_3H_7COONa and $NaNO_3$- iso-C_3H_7COOK which represent diagonals in the state diagram (Figs. 3 and 8) of four component systems. Besides the binary systems, 16 ternary sections, denoted in Fig. 3 by Roman numerals, were studied, and their solubility curves and ivariant points were found. The four-component diagram of Fig. 8, based on these data, shows the solid-liquid equilibrium surface, divided into 6 areas, within which 6 solids of different compositions crystallize, 4 mono- and 2 heteroionic.

Ternary Interacting System of Sodium- and Potassium Isobutyrates and Nitrates

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The central area seems to correspond to iso-$C_3H_7COONa \cdot KNO_3$ composition. The 10 ternary eutectic curves in the diagram mean equilibrium of 2 solid phases and the liquid. The curves intersect at 4 invariant eutectic points E_1, E_2, E_3, E_4 and 1 transitional point P at which the following groups of solid phases crystallize, respectively: (1) iso-$C_3H_7COONa \cdot KNO_3$, iso-C_3H_7COOK, and iso-C_3H_7COONa at the ratio iso-C_3H_7COONa:iso-C_3H_7COOK:KNO_3 = 62.5:17.5:20%; (2) iso-$C_3H_7COONa \cdot KNO_3$, iso-C_3H_7COOK and iso-$C_3H_7COOK \cdot KNO_3$ at the ratio iso-C_3H_7COONa:iso-C_3H_7COOK:KNO_3 = 14.5:47.5:38%; (3) iso-$C_3H_7COONa \cdot KNO_3$, $NaNO_3$, and KNO_3 at the ratio iso-C_3H_7COONa:$NaNO_3$:KNO_3 = = 18.5:39.5:42%; (4) iso-$C_3H_7COONa \cdot KNO_3$, $NaNO_3$ and iso-C_3H_7COONa at the ratio KNO_3:$NaNO_3$: iso-C_3H_7COONa = = 20.5:21:58.5%; (5) iso-$C_3H_7COONa \cdot KNO_3$, $NaNO_3$, and

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Ternary Interacting System of Sodium- and Potassium Isobutyrates and Nitrates

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iso-$C_3H_7COOK \cdot KNO_3$ at the ratio iso-C_3H_7COONa: :iso-C_3H_7COOK:KNO_3 = 11:44:45%. There are 8 figures; 2 tables; and 10 references, 9 Soviet, 1 U.S. The U.S. reference is: F. C. Krachek, J. Am. Chem. Soc., 53, 2607, 1931.

ASSOCIATION: Smolensk State Medical Institute (Smolenskiy gosudarstvennyy meditsinskiy institut)

SUBMITTED: January 7, 1959

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Ternary Interacting System of Sodium- and Potassium Isobutyrates and Nitrates

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SOV/79-30-1-4/78

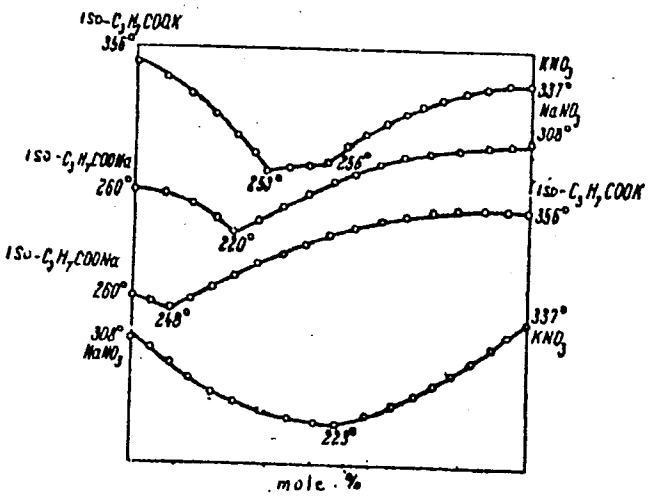

Fig. 1. Melting diagram of binary systems.

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Ternary Interacting System of Sodium- and Potassium Isobutyrates and Nitrates

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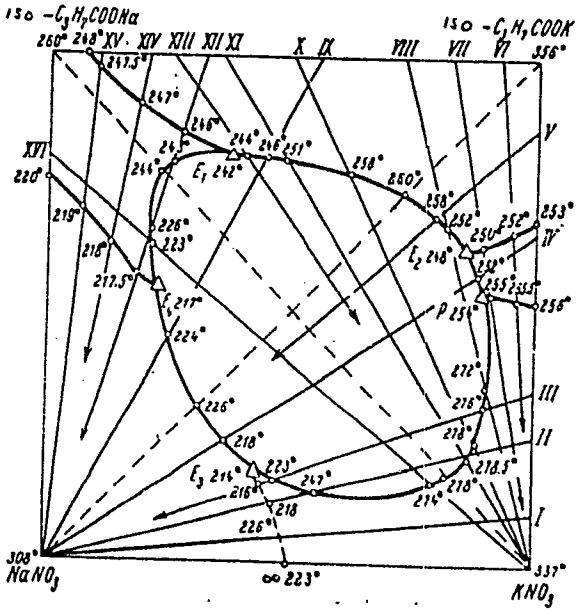

Fig. 3. Distribution on internal sections in the interacting system Na,K // NO_3, iso-C_3H_7COO.

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Ternary Interacting System of Sodium- and Potassium Isobutyrates and Nitrates

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SOV/79-30-1-4/78

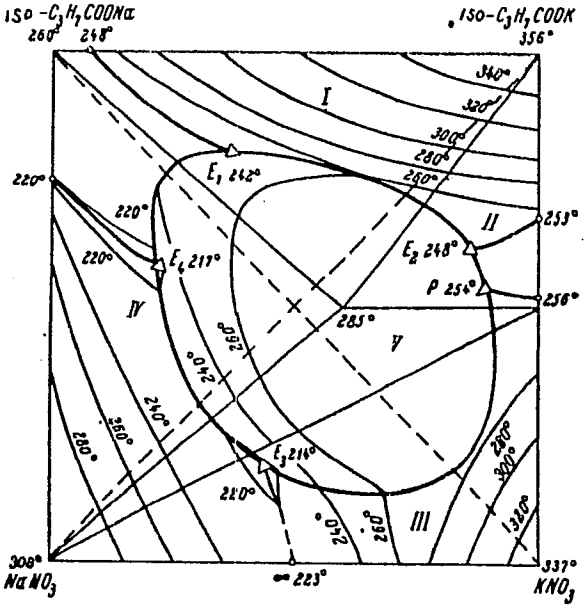

Fig. 8. Solid-liquid equilibrium surface of the system Na, K // NO_3, iso-C_3H_7COO, projected upon the square of compositions.

Card 7/7

DMITRIYEVSKAYA, O.Ye

USSR / General and Specialized Zoology. Insects. P

Abs Jour: Ref Zhur-Biol., No 2, 1958, 6834.

Author : Dimitriyevskaya, O. Ye.
Inst : Not given.
Title : Porthetria dispar L. as a Pest of Coniferous Forests.

Orig Pub: Lesn. kh-vo, 1956, No 10, 80.

Abstract: In the mountain -taiga zone of the Altai region, in the areas of mass reproduction of the caterpillars of the Porthetria dispar L., these caterpillars produce equal damage in leafy as well as in coniferous species: first the fir and larch, and then the pine and the cedar are attacked. Firs injured in 1954, dried up in 1955. The larch trees suffered less and by the end of the summer

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82878

S/120/60/000/02/009/052
E032/E414

24.6810

AUTHORS: Dmitriyevskaya, T.I., Kravtsev, V.V. and Tsvetayeva, I.Ye.

TITLE: Application of End-Window Counters in the Measurement of Low Beta-Activities

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, Nr 2, pp 38-40 (USSR)

ABSTRACT: The present authors discuss the possibility of using end-window counters manufactured in the Soviet Union in the measurement of low beta-activities. It is well known that the background in end-window counters is largely due to external gamma-fields (including the soft component of the cosmic radiation), the hard component of cosmic radiation, and traces of radioactive materials in the counters and the screen. In the present work, the external gamma-field was almost entirely excluded by a steel screen 180 mm thick, and the hard component of cosmic radiation was eliminated with the aid of a screen consisting of Geiger counters in anti-coincidence with the working counter (Fig 1). In Fig 1, 1 is the working counter, 2 and 3 are screening counters (MS-9), 4 is a perspex cover and 5 is a

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Application of End-Window Counters in the Measurement of Low Beta-Activities

support for the working counter. It is shown that if the glass from which the counters are made has a potassium concentration of less than 0.1% and use is made of quartz diaphragms, which screen the working volume from the counter head and the mica window, the counter background can be considerably reduced. When such counters are used in conjunction with the anti-coincidence screen mentioned above, concentrations of the order of 10^{-7} curies/litre of C^{14} and 5×10^{-10} curies/litre of Sr^{90}-Y^{90} can be determined to an accuracy of $\pm$ 15%. This corresponds to the maximum permissible concentration of Sr^{90}-Y^{90}, in water. A comprehensive table is given of various types of Soviet counters and their natural background.

Acknowledgment is made to S.P.Tselishchev and A.B.Dmitriyev for advice and assistance, to V.S.Izhevskiy and Ye.A.Verney for carrying out chemical analysis of the glass and to S.I.Abakumov, L.A.Rozenfel'd and others for taking part in the present work. There

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Application of End-Window Counters in the Measurement of Low Beta-Activities

are 2 figures, 1 table and 7 references, 2 of which are Soviet and 5 English.

SUBMITTED: February 14, 1959

Card 3/3

L 58860-65 EWA(w)-2/EWT(m)/EWA(m)-2 Pt-7 IJP(c) GS
ACCESSION NR: AT5007939 S/0000/64/000/000/0556/0560

AUTHOR: Dmitriyevskiy, V. P.; Zaplatin, N. L.; Rybalko, V. S.; Sarkisyan, L. A.

37
36
B+1

TITLE: Magnetic field of a relativistic 700-Mev proton cyclotron 19

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 556-560

TOPIC TAGS: high energy accelerator, cyclotron magnet, proton accelerator

ABSTRACT: The design and modeling of the magnetic system for a relativistic 700-Mev proton cyclotron, which was discussed by A. A. Glazov, Yu. N. Denisov, B. I. Zamolodchikov, et. al. (p. 547, present conference), is described. The magnetic field in the median plane of an accelerator was required to an accuracy of $\pm 1 \cdot 10^{-2}$ for variations in the extreme radii and $\pm 3 \cdot 10^{-4}$ for the mean value of the field (D. P. Vasilevskaya, V. I. Danilov, et al., *Atomnaya energiya*, 8, 189 (1960)). The parameters of the magnetic system to produce the given tolerances were determined in three stages: first, a theoretical calculation was made of the magnetic field for different elements of the magnetic system; next, individual elements of the magnetic

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system were modeled; and, finally, the entire magnetic system of the accelerator was modeled. The magnetic field of the spiral shims which form the variation was designed on the assumption of uniform magnetization of the shims along the external magnetizing field. In this case the magnetostatic potential of the two rectilinear shims which are arranged symmetrically relative to the plane $z=0$ and which are bound with respect to the vertical by the surfaces $z=h_1(r)$ and $z=h_2(r)$ for the region $|z|<h$ is given by the following expression

$$\Phi(r, \varphi, z)=\sum_{m=0}^{\infty} \varepsilon_m \int_0 M(r') \cos m(\varphi-\varphi') \int_0^{\infty} [e^{-\lambda h_1(r')}-e^{-\lambda h_2(r')}] \operatorname{sh} \lambda z J_m(\lambda r) J_m(\lambda r') d\lambda ds,$$

which was discussed by V. I. Danilov, et al. (Preprint of OIYaI P-409, Dubna, 1959). To calculate the variation in the magnetic field and to determine the basic parameters of the cyclotron's magnetic system it is necessary to know the distribution of magnetization of the spiral shims along the radius. This distribution can be found by calculating the demagnetization factor and the magnetization curves. The basic parameters of the spiral shims are found on the basis of investigations of the magnetic field of the rectilinear shim system. Preliminary investigations of the field of the model showed that the parameters selected for the magnetic system will

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ACCESSION NR: AT5007939

ensure the required law governing the change of field variation within the limits of the tolerances with the exception of the extreme radii. A configuration of the spiral shims and the pole shoes of the electromagnet is found which produces a magnetic field in the median plane that is close to the assigned field. Orig. art. has: 2 figures.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy, Dubna (Joint Institute of Nuclear Research)

SUBMITTED: 26May64 ENCL: 00 SUB CODE: NP, EM

NO REF SOV: 003 OTHER: 000

Card 3/3

DMITRIYEVSKIY, A.

DMITRIYEVSKIY, A., predsedatel' tekhnicheskoy komissii sorevnovaniy.

Automobile cross-country championship of the Torpedo Volunteer Sport Society. Za rul. no.11:22 N '57. (MIRA 11:1)
(Podol'sk--Automobile racing)

DMITRIYEVSKIY, A., chempion SSSR po ralli 1958 goda.

On Ukrainian and White Russian highways. Za rul. 16 no.8:4-5 Ag '58.
(MIRA 11:9)
(Ukraine--Attomobile racing) (White Russia--Automobile racing)

SOV/124-58-5-5014

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 11 (USSR)

AUTHOR: Dmitriyevskiy, A.A.

TITLE: An Investigation of the Motion of a Machine Subjected to Forces That Are Functions of Position, Speed, and Time (Issledovaniye dvizheniya mashinnogo agregata pri silakh, zavisyashchikh ot polozheniya, skorosti i vremeni)

PERIODICAL: Tr. Leningr. voyen.-mekhan. in-t, 1957, Nr 6, pp 152-157

ABSTRACT: An account is given of the method used by M.A. Skuridin [Tr. Seminara po teorii mekhanizmov i mashin (Proceedings of the Seminar on the Theory of Mechanisms and Machines). In-t mashinoved. AN SSSR, 1951, Vol 13, Nr 45] to investigate the motion of a machine. It is proposed that the problems of the motion of the machine be solved graphically, where the diagrams used are similar to those employed to solve these same problems under a method propounded previously by the reviewer [Tr. Seminara po teorii mekhanizmov i mashin (Proceedings of the Seminar on the Theory of Mechanisms and Machines). In-t mashinoved. AN SSSR, 1948, Vol 4, Nr 15]. An example is given by way of illustration. V.A. Zinov'yev

Card 1/1

1. Machines--Motion 2. Dynamics 3. Mathematics--Applications

PHASE I BOOK EXPLOITATION SOV/6122

Dmitriyevskiy, Andrey Aleksandrovich, and Vsevolod Nikolayevich Koshevoy

Fizicheskiye osnovy poleta raket (Physical Principles of Rocket Flight). Moscow, Voyenizdat, 1962. 77 p. (Series: Za voyenno-tekhnicheskiye znaniya. Raketnaya tekhnika) 21,000 copies printed.

Ed.: S. P. Kiselev; Tech. Ed.: A. N. Mednikova.

PURPOSE: This booklet is intended for noncommissioned officers, cadets, and the general reader.

COVERAGE: Basic principles of rocketry (ballistic and guided missiles) are presented in lay terms. The fundamentals of physics, mechanics, jet propulsion, gas dynamics, aerodynamics, and ballistics are discussed. Attention is given to design, structure, propulsion system, rocket staging, propellant, control, stabilization, instrumentation, range, launching, and trajectory. The booklet is

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Physical Principles (Cont.)

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based on open sources. No personalities are mentioned. There are 17 references, all Soviet (including 2 translations).

TABLE OF CONTENTS:

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I. Physical Laws on Which the Theory of Reaction Propulsion Is Based 10

II. Thrust of Reaction Engine 29

III. Rocket Flight 46

IV. Flight Characteristics of Rockets of Different Types 65

Bibliography 79

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Physical Principles (Cont.) SOV/6122

AVAILABLE: Library of Congress

SUBJECT: Aerospace

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AD/dk/jk
11-23-62

SEREBRYAKOV, Mikhail Yevgen'yevich. Prinimali uchastiye: VOROB'YEV, P.A., kand. tekhn. nauk; SIROTINSKIY, V.F., kand. tekhn. nauk; YEGOROV, V.S., kand. tekhn. nauk; DMITRIYEVSKIY, A.A., doktor tekhn. nauk, prof., retsenzent; USTINOV, V.F., kand. tekhn. nauk, dots., retsenzent; DEMUSYAK, A.G., inzh., nauchnyy red.; MOROZOVA, P.B., red. izd-va; KARPOV, I.I., tekhn. red.

[Interior ballistics of barrel systems and powder rockets] Vnutrenniaia ballistika stvol'nykh sistem i porokhovykh raket. 3. izd., dop. i perer. Moskva, Oborongiz, 1962. 703 p. (MIRA 15:12)

(Ballistics, Interior)

L 51471-65 ARG/EED-2/EEO-2/EWP(m)/EPR/EEC(k)-2/EWG(v)/EWA(h)/EWA(s)-2/EWP(c)/T-2/
EWP(k)/EWA(c)/EWP(d)/EWT(l)/EWT(m)/EEC(b)/EWP(h)/FCS(k)/FBD/FEO/FS(v)-3/EEC(a)/FSS-2/
AM5014768 Ps-4/Pae-2/Pv-4 BOOK EXPLOITATION IJP(c) EM/WW/GW/BC UR/

Dmitriyevskiy, Andrey Aleksandrovich; Koshevoy, Vsevolod Nikolayevich

Principles of rocket flight theory (Osnovy teorii poleta raket). 106 104 B+1
Moscow, Voyenizdat M-va obor. SSSR, 1964. 310 p. illus., biblio.
11,000 copies printed.

TOPIC TAGS: rocket flight theory, rocket, ballistic rocket, control, guidance 9

PURPOSE AND COVERAGE: This book is intended for officers, students of military educational institutions, and students of civilian educational institutions. It may be also useful to readers interested in rocket engineering. The author analyzes forces and moments acting on rockets in flight and explains the theoretical approach to the calculation of rocket flight.

TABLE OF CONTENTS:

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Submitted: 27 Jul 64

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KISELEV, Sergey Petrovich; DMITRIYEVSKIY, A.A., doktor tekhn. nauk, retsenzent

[Rocket in the aerial ocean] Raketa v vozdushnom okeane. Moskva, Mashinostroenie, 1965. 107 p. (MIRA 18:11)

DMITREVSKIY, A. V.

DMITREVSKIY, A. V. --"The Theory and Design of an Electrical Axonograph." Min Higher Education USSR. Baku, 1956. (Dissertation for the Degree of Candidate in Technical Sciences.)

So.: Knizhnaya Litopis', No. 7, 1956.

DMITRIYEVSKIY, A.N., KUROV, B.A., kandidat tekhnicheskikh nauk.

Bench testing of engines having air cooling. Avt. i trakt. prom. no.5: 21-25 My '57. (MIRA 10:6)

1. Nauchno-issledovatel'skiy avtomotornyy institut.
(Automobiles--Engines--Cooling)

DMITRIYEVSKIY, A.V., kand. tekhn. nauk.

Studying the motion of machine units subjected to forces depending on position, speed and time. Trudy LVMI no.6:152-157 '57.
(Machinery, Kinematics of--Graphic methods) (MIRA 11:5)

DMITRIYEVSKIY,A.V., Cand Tech Sci --(diss) "Study of the performing process of ~~a reactor~~ an engine with a double consecutive ~~exhaust~~ discharge of ~~the exhaust~~ exhaust gases." Los, 1958, 18 pp (Min of Higher Education USSR. Mos Automechan Inst), ~~in S.I.Ya'Bilov),~~ 180 copies (KL,46-58,140)

AUTHOR: Dmitriyevskiy, A.V. SOV/113-58-2-7/15

TITLE: The Process of Admitting (the Gas) in an Engine With Consecutive Double Expulsion of Exhaust Gases (Protsess napolneniya v dvigatele s dvoynym posledovatel'nym vypuskom otrabotavshikh gazov)

PERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 2, pp 24 - 29 (USSR)

ABSTRACT: The double expulsion of exhaust gases in engines allows the degree of compression to be increased without an increase of the octane number of the fuel. The heat stress of the exhaust valves is also reduced. In 1951 a 4-cylinder engine type DN with double expulsion of exhaust gases was proposed by V.V. Nornevskiy. The mass-produced engine "Moskvich-400" was used as a base on which the new engine was developed. There are two exhaust systems in the engine, one working with exhaust windows and the other with exhaust valves. The principal parameters of these systems are given in Table 1. The average temperature of the ex-

Card 1/2

The Process of Admitting (the Gas) in an Engine With Consecutive Double Expulsion of Exhaust Gases

haust gases is reduced by 135-310°C in variant I and by 230-360°C in variant III (Figure 2). A reduction of the window cross section by 38.5% reduced the quantity of the gases passing the exhaust windows by 67-49% (Figure 3). The power of the engine in the range of 1,000-3,800 rpm increased by 10.3-14% due to better gas admission. The heating of the fuel mixture from 24°C to 32°C increases the gas admission coefficient by 7.7-9.2%. A proper selection of the valve sizes and the suction phases increases the coefficient by another 4-5%. There are 7 graphs, 3 tables, and 1 diagram.

ASSOCIATION: NAMI

1. Internal combustion engines--Perfromance 2. Exhaust systems --Performance 3. Gases--Exhaust systems 4. Exhaust gases --Temperature factors

Dmitriyevskiy, A.V.

11(1); 26(4) PHASE I BOOK EXPLOITATION SOV/3049

Moscow. Vyssheye tekhnicheskoye uchilishche

Povysheniye moshchnosti i uluchsheniye ekonomichnosti dvigateley vnutrennego sgoraniya; doklady i soobshcheniya na nauchno-tekhnicheskoy konferentsii kafedry "Dvigateli vnutrennego sgoraniya" MVTU imeni Baumana (Increasing the Output and Improving the Economy of Internal Combustion Engines; Reports and Transactions Presented at the Scientific and Technical Conference Held by the Department of Internal Combustion Engines, MVTU imeni Bauman) Moscow, Mashgiz, 1959. 219 p. Errata slip inserted. 4,500 copies printed.

Ed.: A.S. Orlin, Doctor of Technical Sciences; Ed. of Publishing House: L.I. Yegorkina; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on Automotive, Tractor, and Agricultural Machine Building: I.M. Bauman, Engineer.

PURPOSE: This collection of articles is intended for scientific and engineering personnel of research institutes and machine-building plants.

COVERAGE: The collection contains reports and papers dealing with better economy and greater capacities for internal combustion engines. Experimental results are stated and their effectiveness evaluated. The conference took place in 1957. The introduction to the collection contains short summaries of the articles. No personalities are mentioned. References follow several of the articles.

Charsin, N.M. [Doctor of Technical Sciences, MVTU imeni Bauman]. Generalized Characteristics of Turbopiston Engines 138

The author analyzes factors affecting the performance of turbopiston engines. Indicator efficiency is computed, and methods of determining performance coefficients are stated.

Dmitriyevskiy, A.V. [Engineer, NAMI]. Double Exhaust as a Device for Increasing Coefficients of Power Output and Economy in Piston Engines 154

The author analyzes discharge coefficients for a four-stroke carburetor engine with the flow of gases through both the exhaust valves and the ports in the lower end of the cylinder. Comparison is made between DV engines, designed for double exhaust, and the standard "Moskvich-402" engine. The author concludes that double exhaust saves 20 percent more fuel.

Roganov, S.G. [Candidate of Technical Sciences, Docent]. Measurement of Air Flow Through Cylinders 187

Mironov, A.P. [Engineer, NATI]. Experimental Study of Mixture Formation in Turbulence Combustion Chambers 192

The author reports on results of a study of the mixture-formation process by means of high-speed photography.

Stolbovskiy, V.V. [Engineer, TsKB]. Some Research Done on Engines With High R.P.M. Coefficients 196

The author reports on tests and results obtained with high-r.p.m. engines and outlines some attempts to increase engine performance and fuel economy. Six types of Soviet motorcycle engines (S-154, S-155, S-254, S-257, S-354, and S-555) are analyzed, and their specifications are given.

Yeganyan, Yu.L. [Engineer, MVTU imeni Bauman]. Study of the Gas-exchange Process in a Dynamic One-stroke Model 208

Kos'min, S.Yu. [Engineer, NAMI]. Study of the Interaction Between Two

DMITRIYEVSKIY, A.V., kand.tekhn.nauk; IONKIN, N.P.

Antiknock qualities of modern automobiles. Avt.prom. 28 no.5: 20-23 My '62. (MIRA 15:5)

1. Gosudarstvennyy soyuznyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.
(Automobiles--Engines--Testing)

DMITRIYEVSKIY, A.V., kand. tekhn. nauk

Selection of the degree of compression and dimensions of the oval combustion chamber of a carburetor engine. Avt. prom. 30 no.6:4-7 Je '64. (MIRA 17:12)

1. TSentral'nyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.

DMITRIYEVSKIY, A.V., kand. tekhn. nauk

Conference on the increase of capacity and improvement of quality of engines. Avt. prom. 30 no.7:44-45 Jl '64. (MIRA 17:9)

1. TSentral'nyy ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skiy avtomobil'nyy i avtomotornyy institut.

GLAGOVSKIY, S.A.; DMITRIYEVSKIY, A.V., kand. tekhn. nauk

Small cylinder capacity engine with V-shaped cylinders. Avt. prom. 31 no.9:9-12 S '65. (MIRA 18:9)

1. TSentral'nyy nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni avtomobil'nyy i avtomotornyy institut.

DMITRIYEVSKIY, G.V., otv. za vypusk; USENKO, L.A., tekhn. red.

[Maintenance regulations for the installation of traction substations of electrified railroads] Pravila soderzhaniia ustroistv tiagovykh podstantsii elektrifitsirovannykh zheleznykh dorog. Moskva, Vses.izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 154 p. (MIRA 15:1)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye elektrifikatsii i energeticheskogo khozyaystva.
(Electric railroads--Substations)

MOCHENOV, I.G., inzh.; DMITRIYEVSKIY, G.V., inzh.; GRINBERG, M.M., inzh.

Ways of improving the performance of rectifiers with consecutive valve connection. Elek.i tepl.tiaga 5 no.11:10-12 N '61.
(MIRA 14:11)
(Electric current rectifiers)
(Electric railroads—Substations)

DMITRIYEVSKIY, G.V., inzh.

Rapid-acting "AB-3/4" switch for traction substations. Elek. i tepl.tiaga 6 no.4:3-4 Ap '62. (MIRA 15:5)
(Electric railroads--Substations)
(Electric switchgear)

KUT'IN, A.I.; DMITRIYEVSKIY, G.V., inzh., otv. za vypusk; VOROB'YEVA, L.V., tekhn. red.

[Instructions on the installation, operation, and repair of the control apparatus of mercury-arc converters] Ukazaniia po montazhu, ekspluatatsii i remontu apparatury rezhimnoi avtomatiki rtutnykh preobrazovatelei. Moskva, Transport, 1964. 74 p. (MIRA 17:3)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye elektrifikatsii i energeticheskogo khozyaystva. 2. Starshiy inzhener otdeleniya elektrifikatsii Vsesoyuznogo tsentral'nogo nauchno-issledovatel'skogo instituta Ministerstva putey soobshcheniya (for Kut'in).

MOCHENOV, I.G., kand.tekhn.nauk; DMITRIYEVSKIY, G.V.; PANFIL', L.S.; PAKHOMOV, V.Ya.; VOLKOV, N.N.

Efficiency of voltage regulation at the tractive substations. Zhel.dor. transp. 46 no.11:72-75 N '64. (MIRA 18:1)

1. Glavnyy spetsialist Glavnogo upravleniya elektrifikatsii i energeticheskogo khozyaystva (for Dmitriyevskiy). 2. Nachal'nik sluzhby elektrifikatsii i energeticheskogo khozyaystva Zapadno-Sibirskoy dorogi (for Panfil'). 3. Glavnyy inzh. sluzhby elektrifikatsii i energeticheskogo khozyaystva Zapadno-Sibirskoy dorogi (for Pakhomov).

DMITRIYEVSKIY, I.

Work bench of a new construction. Prof.-tekh.obr. 22 no.11:13 N '65. (MIRA 18:12)

1. Direktor professional'no-tekhnicheskogo uchilishcha No.6 g. Tambova.

DMITRIYEVSKIY, I.B.

Universal caliper. Mashinostroitel' no.1:29 Ja '65.
(MIRA 18:3)

DMITRIYEVSKIY, I.B.

Attachment for grinding through key beds. Stan. i instr. 36 no.2:39-40 F '65. (MIRA 18:3)

45453
S/892/62/000/001/016/022
B102/B186

AUTHORS: Baranov, V. F., Kolobashkin, V. M., Dmitriyevskiy, I. M.

TITLE: An iron-free beta-spectrometer with r_o=200 mm

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Voprosy dozimetrii i zashchity ot izlucheniy, no. 1, 1962, 108-112

TEXT: The iron-free magnetic beta-spectrometer with double electron focusing ($\pi\sqrt{2}$), designed, constructed and teated by Baranov, was analyzed, and on the basis of the data obtained an enlarged instrument of the same type was built. Its stable-orbit radius of 200 mm is twice that of the first model; the other parameters are the same. It is designed for electrons of $E \leq 3$ Mev. The maximum angular divergence of the beam is $\pm 11.4^\circ$ (axial) and $^{+11.4^\circ}_{-16.2^\circ}$ (radial) if the solid angle is 1.5% of 4π. The water-cooled magnet coils have a total resistance of 12.5ohms. On application, the instrument shows a relative half-width of the Cs^{137} K-conversion line of 1% in the case of a β=3/8 field, 2 mm source diameter, and a 2 mm input slit. There are 3 figures.

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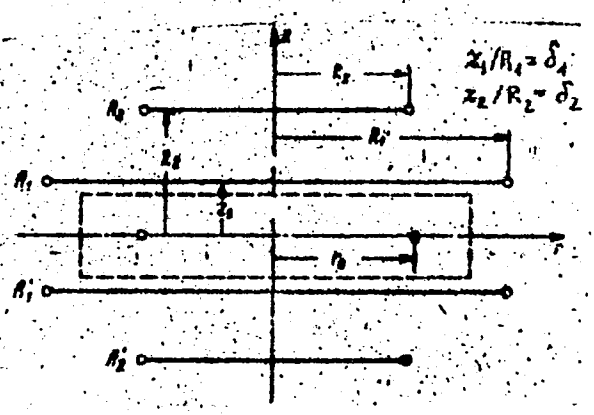
S/892/62/000/001/016/022
B102/B166

An iron-free beta-spectrometer ...



1) $\delta_1 = 0.2131$ и $\delta_2 = 1.0073$; ($\gamma_0 = 1/2$)
2) $\delta_1 = 0.2011$ и $\delta_2 = 0.8982$; ($\gamma_0 = 3/8$)
3) $\delta_1 = 0.1881$ и $\delta_2 = 0.8667$. ($\gamma_0 = 1/4$)

$$\gamma_1 = \frac{r_0}{R_1} = 0.6002; \quad \gamma_2 = \frac{r_0}{R_2} = 1.0483;$$

$$R_2/R_1 = 1.827$$

Fig. 1
Diagram of electromagnet

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45454

S/892/62/000/001/017/022
B102/B186

24,6800

AUTHORS: Baranov, V. F., Dmitriyevskiy, I. M., Zhenin, Yu. S.

TITLE: A beta-gamma-coincidence spectrometer

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Voprosy dozimetrii i zashchity ot izlucheniy, no. 1, 1962, 113-120

TEXT: The authors have designed, constructed and tested an iron-free lens spectrometer with a thick magnetic lens; the chamber size is 1000 · 120 mm, the resolution is δ = 1.6% and the relative solid angle is ω_β = 0.2%. Source and counter are arranged symmetrically in relation to the spectrometer field. It is designed for E ≤ 3.4 Mev; the electrons are recorded by a plastic scintillation counter connected through a 50-mm Plexiglas light pipe with an ФЭУ -11Б (FEU-11B) photomultiplier. The gammas are recorded with a 30·30 mm NaI(Tl) counter crystal, connected with the same multiplier. The relative aperture of the gamma spectrometer is adjusted by varying the distance between source and transmitter, the magnetic field being compensated by shifting the magnetic shield. The negative pulses induced at the FEU anode by

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S/892/62/000/001/017/022
B102/B186

A beta-gamma-coincidence spectrometer

electrons are fed via cathode follower and UU-2(USh-2) amplifier to the fast-coincidence circuit; those induced by gammas are fed via a two-stage pre-amplifier, an AAD0-1(AADO-1) pulse-height analyzer and also a "Kashtan"-type amplifier to the fast-coincidence circuit. A diode limiter at the input of the coincidence unit limits the positive pulses to a height above 10 v. The subsequent stages are a flip-flop oscillator, a phase inverter, a differentiating RC-circuit with diode, a positive-overswing discriminator and a Rossi-type fast-coincidence circuit. Its time resolution can be varied between $3 \cdot 10^{-7}$ and $3 \cdot 10^{-8}$ sec. Finally the pulses are fed via a control unit to the counter radiometer, type PC-5 (PS-5M) "Volna". The instrument was tested by measuring and comparing the photo-peaks of the Hf^{181}, Cs^{137}, and Co^{60} gamma lines. The deviation from linearity was less than 1%; the half-width of the photopeak of the Cs^{137} gamma line was 11%. For graduation, the Cs^{137} K-conversion line was used. As an example the spectra obtained for $Ce^{144}+Pr^{144}$ are given. There are 6 figures.

Card 2/2

BARANOV, V.F.; DMITRIYEVSKIY, I.M.

Determining the partial concentrations of radioactive gases in a mixture of known isotope composition. Vop. dozim. i zashch. ot izluch. no.2:125-132 '63. (MIRA 17:3)

DMITRIYEVSKIY, I.M.

S/796/62/000/003/016/019

AUTHORS: Baranov, V. F., Dmitriyevskiy, I. M., Titov, B. G.

TITLE: Alignment and calibration of a longitudinal magnetic β-spectrometer.

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Pribory i metody analiza izlucheniy. no.3. 1962, 156-163.

TEXT: A magnetic nonferrous lens-type β-spectrometer (SM) was constructed for certain spectroscopic tasks, e.g., for the identification of radioactive isotopes. A general-view photo and a cross-section are shown. The device was designed for minimum energy consumption consistent with acceptable electronic-optical characteristics. The SM vacuum chamber (VC) was fashioned from a 120-mm ID seamless Cu pipe and was lined with Al. At the center of the axis a Pb block protects the detector from the γ-rays of the source. Source and detector are placed symmetrically relative to the central plane of the lens, 1,000 mm apart. Vacuum: 10^{-6} mm Hg. A pressure-lock arrangement permits exchange of sources with very little vacuum loss. The external lens diam is 520 mm, the internal diam is 200 mm, thickness 250 mm. The lens consists of 5 identical sections, each comprising 825 coils of Cu bus of 4.01 mm^2 cross-section, insulated by fiberglass. The sections are water-cooled. The in-series resistance of the 5 sections is 16 ohm. Total power rejection with water cooling: 5 kw. A 150-amp.hr battery feeds the magnetic

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lens (ML) of the SM. The lens focuses 3-mev electrons with an 8.5-a current. The ML is fixed; alignment consists in changing the position and inclination of the VC relative to the ML. Alignment is highly critical and affects primarily the resolution of a SM. The literature on alignment is scant, and a method was developed independently. Preliminary alignment was performed by measurement of the longitudinal component of the magnetic-field strength in two planes perpendicular to the geometric lens axis. The second step brings the geometric axis of the VC and of the diaphragms bounding the electron beam into coincidence with the magnetic axis of the lens. The accuracy of the preliminary alignment is verified by photographing the beam of conversion electrons of the K-line of Cs^{137}. Concentricity of the central spot (electrons of the continuous β-spectrum) with the geometric axis of the VC and the diaphragm system, and concentric circularity of the monochromatic-electron beam are the alignment criteria. The remaining ellipticity of the beam is produced by a misalignment which results in an additive broadening of the spectral line (calculation per Pratt, W., et al., Rev.Sci.Instrum.,v.22,no.2,1951, 92). The resolution was improved by the introduction of an annular diaphragm in the region of the annular focus. The experimental method for the identification of the location of the annular focus is described. The dependence of the resolution and transmission of the spectrometer on the diameter of the counter window, the aperture of the electron beam, and the width of the slit in the annular diaphragm was also

investigated. The calibration of the β-spectrometer was performed at the maxima of the K- and L-lines of the Cs^{137} conversion electrons. At the maximum of the K-line (H_ρ=3381 œ·cm) the current through the lens I=2.491± 0.002 a. Since the $H_\rho = f(I)$ in nonferrous spectrometers is a straight line, the electrons recorded at I ± 1 a have an impulse H_ρ = 1359± 2 œ·cm. The calibration was verified by reading the β spectrum of P^{32} and the spectrum of the photoelectrons knocked out from a Bi converter (3 mg/cm^2) by Hf^{181} γ-rays. A calibration curve was drawn through the test points, viz., a straight line with a slope of 1359±3 œ·cm/a. There are 7 figures and 5 references (1 Russian-language Soviet and 4 English-language, of which one is cited in Russian translation).

ASSOCIATION: None given.

Card 3/3

ACCESSION NR: AT4021260 S/2892/63/000/002/0125/0132

AUTHOR: Baranov, V. F., Dmitriyevskiy, I. N.

TITLE: Determination of partial concentrations of radioactive gases in a mixture with a known isotope composition

SOURCE: Voprosy* dozimetrii i zashchity* ot izlucheniy, no. 2, 1963, 125-132

TOPIC TAGS: radioactive gases, argon, krypton, xenon, fission product, β active gas, ionization chamber, β counter, scintillation counter, STS-5, mass spectrometer, scintillation spectrometer, magnetic β spectrometer

ABSTRACT: Methods of determining the partial concentrations of components in the composition of the gaseous wastes of a reactor are studied. The following spectrometric methods of gas analysis are used: 1) absorption method; 2 maghetic β spectrometer; 3) mass spectrometer; 4) scintillation spectrometer. The values for each method are given and means for increasing sensitivity are proposed. Argon 41 concentrations on the order of 0.1 are detected. The value of effectiveness of the counters can be determined by means of straight calibration with a standard gas. The gas calibration to a tolerance of 1% in determining the activity can be accomplished with the aid of a proportional or Geiger counter with a geometry of 4π. Orig. art. has: 8 formulas and 2 tables.

Card 1/2

MOSCOW ENGINEERING-PHYSICS INST.

DMITRIYEVSKIY, I.P.

PARTICLE ACCELERATORS: SYNCHROCYCLOTRON

"Extraction of a Proton Beam from a Six-Meter Synchrocyclotron by Excitation of Radial Oscillations", by I.P. Dmitriyevskiy, V.I. Danilov, Yu.N. Denisov, and N.L. Zaplatin, V.S. Katyshev, A.A. Kropin, and A.V. Chestnoy, Joint Institute for Nuclear Research, Pribory i Tekhnika Eskperimenta, No 1, January-February 1957, pp 11-14.

Report on the results of the development of a new method for extraction accelerated particles from the chamber of a six-meter synchrocyclotron at the Joint Institute for Nuclear Research. The theoretical and experimental investigations cover the following subjects: (a) creation of local inhomogeneities in the magnetic-field intensity of the electromagnet; (b) calculation and trimming of the magnetic channel; (c) focusing of the particles. The use of the method described in this article for the extraction of 680 Mev protons gives an extraction coefficient of approximately 6%, the total number of particles in the beam from the accelerator being 7×10^{10} sec^{-1}. Reference is made to work by C.E. Leicht (Physical Review, 1950, 78, 89), Powell and Henrich (Review of Scientific Instruments, 1948, 19, 520),

Card 1/2

PARTICLE ACCELERATORS: SYNCHROCYCLOTRON

Tuch and Teng (Physical Review, 1951, 81, 305), and K.J. LeCouteur (Proceedings Physical Society, 1951, 64 B, 1073 and 1953, 66 B, 25).

Card 2/2

L 21736-66 EWT(d)/EWT(l)/EWP(w)/EWP(f)/EPF(n)-2/EWP(v)/T-2/EWP(k)/ETC(m)-6/EWT(m)
IJP(c) WW/EM

ACC NR: AP6005896 (N) SOURCE CODE: UR/0096/65/000/011/0090/0092

AUTHOR: Dmitriyevskiy, I. P. (Engineer)

ORG: Kiev State University im. T. G. Shevchenko (Kievskiy gosudarstvennyy universitet)

TITLE: The unsteady state temperature field of a turbine disk

SOURCE: Teploenergetika, no. 11, 1965, 90-92

TOPIC TAGS: turbine design, heat transfer coefficient, temperature distribution, turbine disk

ABSTRACT: To evaluate the efficiency of a system for cooling turbine disks, it is necessary to determine the temperature fields within the body of the disk. From the point of view of thermal stresses, there is great danger in start-up and shut-down in cases where the parameters of the medium increase to their maximum values instantaneously or within a very short period of time. The present article proposes a mathematical method for determining the temperature field in a disk of any given arbitrary form when the heat transfer coefficients and the temperatures of the medium at the lateral surfaces of the disk are a function of the radius. In addition, the article gives an actual calculation by the

UDC: 621.438.536.21.001.24

L 21736-66

ACC NR: AP6005896 O

proposed method of the temperature field in a disk of conical shape. The solution is compared with a solution by a method proposed earlier in the literature. Orig. art. has: 23 formulas and 2 figures.

SUB CODE: 13, 20/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 001

Card 2/2dda

DMITRIYEVSKIY, L.M.

1. ALIKAYEV, V. A.; LYAUSHKIN, A. V.; UZUNOV, N. N.; DMITRIYEVSKIY, L.M.; PLYASKIN, N. V.

2. USSR (600)

4. Sheep - Diseases

7. Prevention of lung diseases in sheep. Sov. zootekh. 7 No. 5, 1952.

9. Monthly List of Russian Accessions. Library of Congress, July 1952. UNCLASSIFIED.

RADKEVICH, P.Ye., prof.; DERIPASKO, P.G.; DMITRIYEVSKIY, L.M.; DAVYDOV, G.D.; SAAKYAN, V.Sh.; FINK, Ye.G.; ATOYAN, P.G., vetvrach.

Poisoning of cattle by corn silage contaminated by pathogenic fungi. Veterinariia 35 no.4:79-81 Ap '58. (MIRA 11:3)

1. Vsesoyuznyy institut eksperimental'noy veterinarii (for Radkevich). 2. Nachal'nik vetotdela (for Deripasko). 3. Starshiy vetvrach vetotdela Groznenskogo oblsel'khozupravleniya (for Dmitriyevskiy). 4. Direktor oblvetbaklaboratorii (for Davydov). 5. Zaveduyushchiy khimicheskim otdelom (for Saakyan). 6. Glavnyy vetvrach Groznenskogo rayona (for Fink). 7. Kolkhoz imeni 1-go Maya (for Atoyan).
(Cattle--Diseases and pests)

S/204/62/002/004/003/019
E071/E433

AUTHORS: Kazanskiy, B.A., Dorogochinskiy, A.Z., Sterligov, O.D., Lyuter, A.V., Dmitriyevskiy, M.L., Nazarov, P.S.

TITLE: Dehydrogenation of isopentane into isoamylenes on an alumochromopotassium catalyst

PERIODICAL: Neftekhimiya, v.2, no.4, 1962, 448-456

TEXT: A systematic study of the process of dehydrogenation of isopentane into isoamylenes under conditions of a stationary and moving layer of granulated catalyst K-544 was carried out on experimental installations of Groz NII. Tests on the stationary layer were carried out on a laboratory and an enlarged installation. The reactors with a stationary layer of the catalyst were of the capacity of 40 and 500 cm^3 respectively. Tests in the moving layer were made in a co-current continuous pilot plant with a reactor (4 litres) and a regenerator (4.7 litres). The volume of the catalyst - 35 litres, throughput - about 100 litres/day, the velocity of circulation of the catalyst - up to 16 litres/hour. The analyses of the reaction products were made by chromatographic and other chemical methods. The influence of the temperature, volume velocity and rate of recirculation of

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the catalyst on the main parameters of the process as well as the behaviour of the catalyst were studied. It was found that the catalyst had a good and stable activity. During an operating period of 1100 hours in a stationary layer and 400 hours in a moving layer its activity remained practically unchanged. Under the optimum condition of the process (temperature - 540°C and volume velocity - 1 hour^{-1}) the yield of isoamylenes amounted to 30 to 31 wt.% calculated on raw material (98.6% of isopentane) with a total yield of unsaturated hydrocarbons C_5 of 34 to 38 wt.%. The catalyst has a satisfactory strength and good regeneration characteristics. The velocity of burning out of coke from the most inaccessible layers of catalyst K-544 amounted to 20 litres/litre of catalyst per hour, in comparison with that for aluminosilicate catalysts of 13 to 16 litres/litre of catalyst per hour. There are 6 figures and 5 tables.

ASSOCIATION: Institut organicheskoy khimii AN SSSR
im. N.D.Zelinskogo (The Institute of Organic Chemistry AS USSR imeni N.D.Zelinskiy) GrozNII

KAZANSKIY, B.A.; DOROGOCHINSKIY, A.Z.; SIERLIGOV, O.D.; LYUTER, A.V.; DMITRIYEVSKIY, M.L.; NAZAROVA, M.P.; REKVIASHVILI, A.N.

Studying the dehydrogenation of isopentane on K-544 and K-5 finely divided catalysts. Trudy GrozNII no. 15:241-253 '63. (MIRA 17:5)

Dmitriyevskiy, M.M.

MEYLIKHOV, M.Ye., inzhener; DMITRIYEVSKIY, M.M., inzhener

The new RTN-M turbine pump for locomotives. Tekh.zhel.dor. 7 no.1: 27-29 Ja '48. (MLRA 8:11)

(Locomotives) (Pumping machinery)

DMITRIYEVSKIY, M.V.

SUKHOV, Dmitriy Konstantinovich; POSPELOV, A.A., retsenzent; DMITRIYEVSKIY, M.V., retsenzent; INDZHIBELI, K.Kh., redaktor; KAN, P.M., redaktor izdatel'stva; SALAZKOV, N.P., tekhnicheskiy redaktor

[Manual for inspectors of communication lines] Uchebnoe posobie dlia linеinogo nadsmotrshchika sviazi. Moskva, Izd-vo "Rechnoi transport," 1956. 231 p. (MLRA 10:2)
(Telephone lines) (Telegraph lines)

DMITRIYEVSKIY, N. G.

Dissertation: "Hydraulic Calculation of Flushing Basins of a Sewerage System." Cand Tech Sci, Kiev Construction Engineering Inst, Kiev, 1953. (Referativnyy Zhurnal--Mekhanika, Moscow, Apr 54)

SO: SUM 243, 19 Oct 1954

DMITRIYEVSKIY, N. G.

"Hydraulic Design of Wash Basins of the Sewage Network." Min Culture USSR, Leningrad Order of Labor Red Banner Construction Engineering Inst, (Leningrad), 1954 (Dissertation for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis', No. 32, 6 Aug 55

DMITRIYEVSKIY, N.G., kandidat tekhnicheskikh nauk.

Stream energy losses in drops of rectangular section. Gidr. i mel. 8 no.9:50-55 S '56. (MLRA 9:10)

(Hydraulic engineering--Tables, calculations, etc.)

BOTUK, B.O.; DMITRIYEVSKIY, N.G.; ALEKSEYEV, Yu.S.

Effect of the lateral current compression at the jump entrance on the coefficient of velocity of the hydraulic jump. Izv.vys.ucheb.zav.; stroi. i arkhit. no.5:119-125 '58. (MIRA 12:1)
(Hydraulic jump)

BOTUK, B.O. (Odessa); DMITRIYEVSKIY, N.G. (Odessa); SAVCHENKO, G.D. (Odessa); ALEKSEYEV, Yu.S. (Odessa)

Efficient type of distributing structures in sewage purification works. Vod.i san.tekh. no.4:22-24 Ap '60. (MIRA 13:6)

(Sewage--Purification)

DMITRIYEVSKIY, N. N.

Quarrying of local construction materials; quarrystone, gravel, and sand. Moskva, Vsesoyuznoe kooperativnoe ob"edinenie izd-vo, 1948. 55 p. (49-23377)

TN277.D55

DMITRIYEVSKIY, N.N.

5(3); 11(4) PHASE I BOOK EXPLOITATION SOV/2021

Akademiya nauk SSSR. Institut nefti

Trudy, t. 12 (Transactions of the Petroleum Institute, USSR. Academy of Sciences, Vol 12) Moscow, Izd-vo AN SSSR, 1958. 395 p. Errata slip inserted. 1,700 copies printed.

Ed.: S. R. Sergiyenko, Professor; Ed. of Publishing House: K. G. Miyessarov; Tech. Ed.: V. V. Golzberg.

PURPOSE: The book is intended for scientists, engineers, and technicians in the petroleum industry.

COVERAGE: This collection of articles describes the results of studies on the chemistry and technology of petroleum and gas conducted in the laboratories of the Petroleum Institute, Academy of Sciences, USSR, in 1956 and 1957. A new section "Petrochemical Synthesis and Technology of Petroleum" has been included in the collection of articles. A list of investigations published by the associates of the Institute in 1956 and 1957 and a list of dissertations for the Doctor's and Candidate's degrees presented in 1956 and 1957 at open sessions of the Academic Council of the Petroleum Institute, Academy of Sciences, USSR, are given.

E. Kh. Iskhakova, F. V. Korenevskaya, I. A. Musayev, and V. V. Shchekin. Change in the Activity of Silica Gel in the Chromatographic Separation of Hydrocarbons 195

III. CATALYSIS AND CATALYSTS

Kagan, Yu. B., A. N. Bashkirov, L. I. Kravtsova, and N. A. Orlova. Fused Iron Catalysts for the Synthesis of Higher Alcohols from Carbon Monoxide and Hydrogen 200

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Kagan, Yu. B., A. N. Bashkirov, S. M. Loktev, N. G. Morozov, and N. A. Orlova. Effect of Added Ferroalloys on the Activity and Stability of Fused Iron Catalysts for the Synthesis from CO_2 and H_2 228

Bashkirov, A. N., and F. I. Novak. Study of Conditions of Synthesis from Carbon Monoxide and Hydrogen in the Presence of Talc Catalysts 240

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Korenevskaya, F. V., and V. V. Shchekin. Activity and Structure of Aluminum Oxide and its Luminescent Properties 267

Korenevskaya, F. V., and V. V. Shchekin. Anomalous Values of the Energy Constant of Fine-Pored Adsorbents 272

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IV. TECHNOLOGY OF PETROLEUM AND PETROCHEMICAL SYNTHESIS

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Bashkirov, A. N., S. A. Lodzik, and V. V. Kamzolkin. Determination of the Content of Primary and Secondary Higher Alcohols by the Dehydration Method 297

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B117/B102

5.3300

AUTHORS: Topchiyev, A. V., Paushkin, Ya. M., Nepryakhina, A. V., Anan'yev, P. G., Dmitriyevskiy, N. N.

TITLE: Acceleration and retardation of n-heptane cracking in molten aluminum and sodium at 300 - 800°C

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1961, 465, abstract 17M153 (Tr. In-ta nefti. AN SSSR, v. 14, 1960, 5-11)

TEXT: The pyrogenic conversion of n-heptane (I) in molten Al and Na was found to take place selectively, depending on the metal used. Al promotes the cracking of I: The degree of conversion amounts to 95 %, as compared to 57 % in pyrolysis. The thermal decomposition of I is strongly retarded by Na: At 600 - 800°C, the degree of conversion reaches 5- 6 % only. The gas obtained by pyrolysis of I in Al contains 40 - 44 % of olefins and 12 - 22 % of H_2. Conversion of Na yields gas containing 75 - 85 % of H_2, which contains virtually no olefins. A diagram of the device is enclosed. [Abstracter's note: Complete translation.]

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DMITRIYEVSKIY, N. V.

KAZANKOV, A. S., Inzhener i DMITRIYEVSKIY, N. V., Inzhener i SERGEYEV, A. I., Inzhener i VOROB'YEV, N. A., Inzhener
Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta stroitel'nogo i dorozhnogo mashinostroyeniya.

ISSLEDOVANIYE V STENDOVYKH USLOVIYAKH UPROSHCHENNOY USTANOVKI MNOGOKOVSHEVOGO EKSKAVATORA DLYA VYYAVLENIYA FAKTOROV, VLIYAYUSHCHIKH NA KONSTRUKTSIYU KOVSHEVOY TSEPI (DINAMIKA, NAPOLNENIYE I RAZGRUZKA KOVSHEY, RABOTA OCHISTITELYA)

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SO: Collection of Annotations of Scientific Research Work on Construction, completed in 1950. Moscow, 1951

DMITRIYEVSKIY, N.V., inzh.; LESOKHINA, G.M., inzh.; SHAL'NIKOV, G.I., kand.tekhn.nauk

Introducing automatic processes in stone-crushing plants. Stroi. i dor. mashinostr. 5 no.8:8-13 Ag '60. (MIRA 13:8)
(Sand and gravel plants) (Automation)

DMITRIYEVSKIY, N.V., inzh.

New apparatus and automatic control systems for stone-crushing plants. Mekh. stroi. 17 no.7:11-16 Jl '60. (MIRA 13:7)

(Automation) (Stone, Crushed)

USPENSKIY, V.P., inzh. (Leningrad); KAREV, N.V., inzh. (Leningrad); DMITRIYEVSKIY, N.V., inzh. (Leningrad); SERGEYEV, A.I., inzh. (Leningrad)

Automatic digging of drainage trenches with given bed inclination. Gidr.i mel. 14 no.3:33-45 Mr '62. (MIRA 15:4)
(Drainage) (Excavating machinery)

TERENIN, A.N.; DMITRIYEVSKIY, O.D.; GERSHUNSKIY, D.N.

Impulse photostimulation of the adsorbates of hematoporphyrin, chlorophyll, leaf pigments and Mg-phthalocyanine. Biofizika 9 no. 1:25-32 '64. (MIRA 17:7)

Dmitriyevskiy, O.D.

USSR/Photochemistry. Radiation Chemistry. Theory of Photographic Process. B-10

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26261

Author : A.N. Terenin, A.V. Karyakin, Ye.B. Lyubomudrov, O.D. Dmitriyevskiy, P.E. Sushinskiy

Title : Alterations of Spectra of Phthalocyanins in Solutions under Action of Powerful Light Impulses.

Orig Pub : Optika i spektroskopiya, 1956, 1, No 4, 456-462

Abstract : Solutions of phthalocyanins (Ph) of Mg. Zn, Fe, Cu and Co in alcohol, acetone, ether, pyridine and toluene (10^{-4} to 10^{-5} M) were liberated of O_2 by vacuum treatment and illuminated with an impulse bulb ISS-250 (flash energy 250 joules, flash duration 10^{-3} to 10^{-4} sec.). The spectra in the range of 0.5 to 0.9μ were photographed with a spectrograph ISP-51. Either the impulse bulb itself, or another impulse bulb lighted by a time relay switch 2×10^{-5} to 2.1 sec. after the flash of the first bulb served as the light source. PhMg and PhZn are subject to a short-duration (from 0.8 to 1×10^{-3} sec. in case of PhMg) discoloration under the action of a flash. The discoloration of PhMg and PhZn is completely eliminated by letting

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Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26261

O_2 into the solution; no discoloration of solutions of PhFe, PhCu and PhCo is observed; solutions of PhMg and PhZn are fluorescent. The surmise is expressed that the short-duration discoloration is the result of the molecule transition into the metastable (triplet) state.

DMITRIYEVSKIY, O. D.

51-2-10/15

AUTHORS: Dmitriyevskiy, O.D., Neporent, B.S. and Nikitin, V.A.

TITLE: A high-speed infrared spectrometer for the 0.8-3.0 μ region. (Skorostnoy infrakrasnyy spektrometr dlya oblasti 0.8-3.0 μ).

PERIODICAL: "Optika i Spektroskopiya" (Optics and Spectroscopy) 1957, Vol.3, No.2, pp.180-181 (U.S.S.R.)

ABSTRACT: Complete translation. The usual methods of measurement of the infrared (i.r.) spectra require considerable time and can therefore be used to study only sufficiently stationary objects. There exists a number of problems where rapid measurement of the i.r. spectra would yield important theoretical and practical results. We constructed a laboratory model of a high-speed spectrometer with a PbS receiver for the region 0.8-3.0 μ. In the monochromator interchangeable dispersing elements were used: a lithium fluoride prism and an echellette reflection diffraction grating. Rapid scanning of the spectrum was achieved by means of an oscillating plane mirror. A wide-band amplifier (with a time constant $\tau \approx 5 \times 10^{-6}$ sec) and vibration (string) and electron (cathode-ray) oscillographs were used for recording the spectra. The vibration-oscillograph record represents a succession of "mirror" pairs of spectra of a selected portion of an object, as shown in Fig.1. Pulses from an additional source /Ref.1/ are used for wavelength calibration (as in oscillogram 2 in Fig.1); the time scale is given [illegible] sinusoidal trace (shown in Fig.1, 1 and 2). The

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DMITRIYEVSKIY, O. D.

49-4-21/23

AUTHORS: B. S. Neporent, V. F. Belov, O. D. Dmitriyevskiy, G. A. Zaytsev, V. G. Kastrov, M. S. Kiseleva, L. A. Kudryavtseva and I. V. Patalakhin.

TITLE: Experience gained in direct measurement of the distribution of the humidity of the atmosphere by means of the spectral method. (Opyt pryamogo izmereniya vysotnogo raspredeleniya vlazhnosti atmosfery spektral'nym metodom).

PERIODICAL: Izvestiya Akademii Nauk, Seriya Geofizicheskaya, 1957 ~~1945~~, No.4, pp. 552-555 (USSR).

ABSTRACT: Some recent American communications (Refs.5-7) refer to investigating the spectrum of the Sun in the infrared range during flights in the upper layers of the atmosphere, in which observation of absorption bands of water vapours are mentioned and views are expressed on the possible concentrations of these vapours. In this paper the results are described of the first attempts to determine directly the content of water vapour in the atmosphere by means of specially designed spectral apparatus. The operation of the instrument was described in detail by Neporent, B.S. et alii (Ref.8); it consists of a step-wise vacuum monochromator with a diffraction lattice of 300 lines/mm of the size 50 x 70 mm which subdivides the infrared range

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Experience gained in direct measurement of the distribution of the humidity of the atmosphere by means of the spectral method.

into five sections (1.24, 1.40, 1.50, 1.88, 2.2 μ), the wave-lengths 1.40 and 1.88μ belong to the absorption bands of water vapour; utilisation of two bands is provided for extending the range of the measured water concentrations. The wave-lengths 1.24, 1.50 and 2.2μ fall between individual bands and serve for determining the initial intensities in the bands 1.40 and 1.88μ by means of interpolation. The linear dispersion of the instrument equals 100 a/mm; the entry and exit slots are 1.5 mm wide. Illumination of the input slot is effected by means of a source with a circular emanating surface fitted with a dispersion plate of magnesium oxide. Experiments carried out at ground level showed that,in the operating range of the spectrum, the role of radiation scattered by the sky is insignificant. The measured radiation is modulated with a frequency of 850 c.p.s. using as a receiver of the radiation a cooled PbS photo resistance. After amplification, the signals are transmitted by radio to the ground. In addition to the basic signals transmitted in the operating position of the diffraction lattice (which is turned by means of a cam), calibrating signals are

Experience gained in direct measurement of the distribution of the humidity of the atmosphere by means of the spectral method.

transmitted and also signals from the pressure gauge, etc. The respective switching is effected by means of a commutator which is coupled with the cam for scanning of the spectrum. The full cycle of the instrument is 2.5 secs and, therefore, the slow changes of the location of the scattering plate of the light source relative to the Sun's rays caused by random oscillations of the instrument during free flight should not affect the results of determination of the relative intensities of the adjacent parts of the spectrum. The results are plotted in graphs. Fig.1 shows the calibration curve obtained on the basis of the exponential law; Fig.2 shows the graduation curve obtained on the basis of the square root; Fig.3 shows a part of the absorption band of water vapour (1.4μ) measured on the spectrometer with altitude scanning, whereby the spectral width of the slot is shown at the bottom part of this Figure. Fig.4 shows the dependence of the absorption function A on the altitude (up to 17 km) for the band 1.4μ; Fig.5 shows the dependence of the quantity of water precipitating along the vertical on the height reached by the instrument; Fig.6 shows the dependence of

Experience gained in direct measurement of the distribution of the humidity of the atmosphere by means of the spectral method.

water concentration in the atmosphere on altitude, in mm of water precipitated per 1 km of the layer. Although the obtained data require further checking, they do indicate the usefulness of the described method and apparatus for such measurements. Increased accuracy and sensitivity of the instrument for measuring low water concentrations could be achieved by using more intensive absorption bands.
There are six figures and 12 references, 4 of which are Slavic.

SUBMITTED: November 13, 1956.

AVAILABLE: Library of Congress.

Card 4/4

AUTHORS: Dmitriyevskiy, O. D., Yermolayev, V. L. 2o-114-4-20/63
Terenin, A. N., Member of the Academy

TITLE: Direct Measurement of the Life of Excited Molecules of Chlorophyll and Analogous Pigments in Different Media (Pryamyye izmereniya vremeni zhizni vozbuzhdennykh molekul khlorofilla i analogichnykh pigmentov v razlichnykh sredakh)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 4, pp. 751-753 (USSR)

ABSTRACT: In order to determine this life τ the authors measured the duration of fluorescence by means of the phase fluorimeter by A. M. Bonch-Bruyevich et al. whose resolving power in time is $2.1o^{-11}$ sec. Other devices used in these investigations and the errors of measurement are also shortly discussed. Fluorescence was excited by the mercury line 436 mμ. Observation was effected through the light filter KC-1o with a thickness of 4 mm. The concentration of the solutions always remained below $1o^{-5}$ mol/l. The values obtained for the solutions of chlorophyll and related pigments in various solvents at + 2o°C are summarized in a table. The here measured life of the excited singlet state of chlorophyll markedly differs from those values which were obtained by indirect methods from the polarization

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Direct Measurement of the Life of Excited Molecules of Chloro- 2c 114-4-20/63
phyll and Analogous Pigments in Different Media

of the fluorescence and from the integral of the absorption band. The decay time of the fluorescence of the pigments depends only little on the solvent. For chlorophyll by it is approximately twice as small as for chlorophyll a, which is connected with the different quantitative yield of fluorescence. In phtalocyanides life is somewhat longer than in pheophitines of the corresponding metals. Hematoporphirin has the longest deday time. If a Zn-atom is introduced into the pigment instead of a Mg-atom, the decay time of the fluorescence is reduced to about half of its former length. A table contains the here obtained data on the decay time of the fluorescence of chlorophyll in natural media. The values thus obtained are about 3-8 times as short as in molecular solutions. In the living leaf τ depends on the intensity of exposure to light. The reduction of τ and the reduction of fluorescence yield in the living leaf are largely due to the high concentration of pigments under these conditions. There are 2 tables and 6 references, 1 of which is Soviet.

SUBMITTED: May 31, 1957

Card 2/2

DMITRIYEVSKIY, O.D.; NIKITIN, V.A.

Interrelation of parameters of recording spectrometers. Part 2: Signal-to-noise ratio and general energetic conditions. Opt.-mekh. prom. 25 no. 2:26-30 F '58. (MIRA 11:7)
(Spectrograph--Noise)

DMITRIYEVSKIY, O.D.; NIKITIN, V.A.

Interrelations of parameters of recording spectrometers. Part 3: Relationship between optical, time, and energy characteristics. Opt.-mekh.prom. 25 no.6:25-27 Je '58. (MIRA 11:10)
(Spectrometer)

53-64-3-4/8

AUTHORS: Dmitriyevskiy, O. D., Heporent, B. S., Nikitin, V. A.

TITLE: High-Speed Spectroscopy (Skorostnaya spektrometriya)

PERIODICAL: Uspekhi Fizicheskikh Nauk, 1958, Vol. 64, Nr 3, pp. 447-492 (USSR)

ABSTRACT: The present survey is divided into parts as follows: the main rules for the registration of the spectra in scanning, i.e. of the development of the spectrum with respect to time to be investigated (the general time equation of the spectrometer, the distortions in form of bands by the monochromator, as well as by the receiving- and recording system, of the resolving power of the spectrometer as a whole, the mutual connection of the energy and time characteristics of the spectrometer, the relations for high-speed recording of the spectra in scanning). The apparatus for high-speed recording of the scopy (the apparatus for the infrared region with thermal receivers, and with photo-resistances, apparatus with photo-multipliers and photo-cells with external photo-effect, apparatus with electronic scanning, multi-channel spectral

analysers and cinespectrographs, the comparison between the parameters of high-speed spectral apparatus). The highest speed of recording is obtained with the best inertialess PbS-receivers using a circuit breaker. The tendency to develop higher registration speed with given (thermal or semiconductor-)receivers inevitably leads to a decrease of the resolving power, as well as to an increase of temporal distortions, which is tolerable, however, only in exceptional cases. According to the authors' opinion the so-called apparatus Nr. 8 is best approximated to optimal operational conditions. For a PbS-receiver this apparatus has a rather high speed ($v \sim 10^5$) and also the resolving power remains sufficiently good. Above all, the distortions in this apparatus are not great. A table gives the published data on high-speed spectral apparatus of various types. There are 29 figures, 2 tables, and 71 references, 18 of which are Soviet.

1. Spectroscopy--USSR 2. Spectrographic analysis--Equipment

24.3420

68319

AUTHORS: Dmitryevskiy, O.D. and Nikitin, V.A. SOV/51-8-1-20/40

TITLE: Measurements of the Apparatus Function of an IKS-11 Spectrometer

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 1, pp 117-118 (USSR)

ABSTRACT: This is a summary of a paper presented at the Confefence on the Theory of Spectroscopic Instruments (Leningrad, March 5-7, 1959). Using the 1.014 μ (9859 cm^{-1}) line from a mercury lamp as a monochromatic source, the authors determined the apparatus-function contour of an IKS-11 spectrometer Nr 530032. The factory adjustment of this monochromator was not disturbed, but the agreement between the slit widths and the slit scale readings was checked and the parallelity of the exit slit and the entry-slit image was verified. It was found that to obtain true values of the slit width the scale readings should be increased by 0.02 mm. Reproducibility of the slit settings was found to be $|\Delta s| = 0.01$ mm. The differences between the widths of the entry and exit slits were not greater than 0.01 mm. The apparatus function contour was recorded using an F-1 prism, the full height of the slit (20 mm) and a scanning rate of 4.6 cm^{-1}/sec. A PbS photoresistor was used as a receiver; it was connected to an a.c. amplifier and a recorder (the effective time constant of the system was $\tau \simeq 0.5$ sec). The results are shown in Fig 1 as a dependence of the apparatus-function

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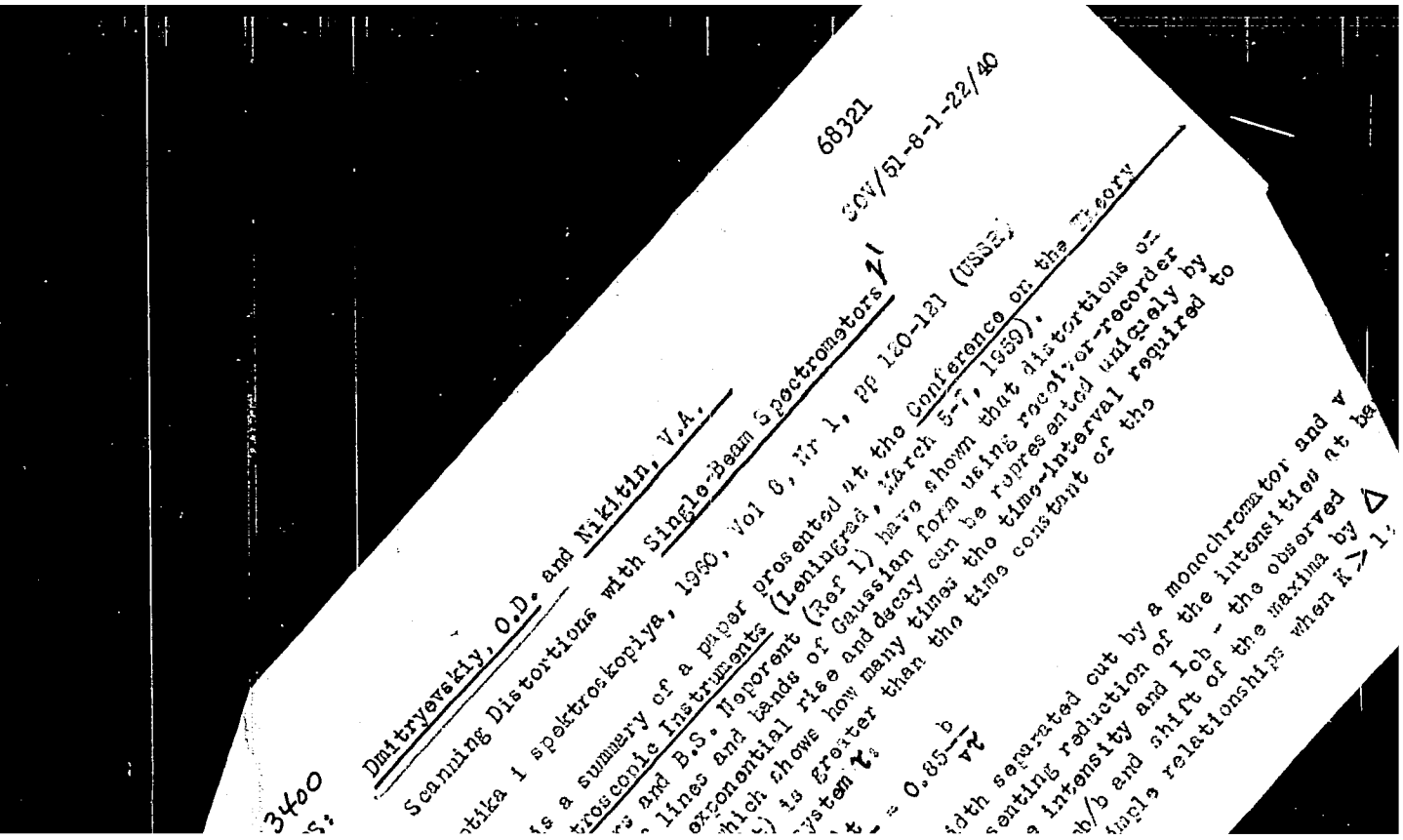
half-width ($\Delta\nu$, in cm^{-1}) on the slit width (s, in mm). The continuous line in Fig 1 gives the result of the usual calculation of the spectral slit width for a dispersion of 677 cm^{-1}/mm; the circles and the dashed curve represent experimental values obtained in determination of the apparatus-function half-widths. Fig 1 shows that when $s \leqslant 0.035$ mm, the apparatus-function width reaches its smallest value of 34 cm^{-1}, which is considerably greater than the diffraction limit of 4 cm^{-1}. This result shows that when IKS-11 spectrometers are used, it is quite pointless to use slit widths smaller than 0.04 mm. The apparatus function curves are shown in Fig 2 for slit widths of 0.04, 0.06, 0.10, 0.20 and 0.25 mm. As expected, the apparatus function approaches a triangular shape at slit widths $s > 0.05$ mm; when slit widths are smaller the apparatus function approaches a Gaussian curve. There are 2 figures.

Note. This is a complete translation.



68321
SOV/51-8-1-22/40
Dmitryevskiy, O.D. and Niktin, V.A.
Scanning Distortions with Single-Beam Spectrometers
Optika i spektroskopiya, 1960, Vol 8, Nr 1, pp 120-121 (USSR)
This is a summary of a paper presented at the Conference on the Theory
(Leningrad, March 5-7, 1959).
Ref 1) have shown that distortions of
exponential rise and decay can be represented uniquely by
which shows how many times the time-interval required to
system τ
$t_{-} = 0.85\tau$
width separated out by a monochromator and v
senting reduction of the intensities
intensity and Ico - the observed
b/b and shift of the maxima by Δ
angle relationships when $K > 1$

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68321

AUTHORS: Dmitryevskiy, O.D. and Nikitin, V.A.

SOV/51-8-1-22/40

TITLE: Scanning Distortions with Single-Beam Spectrometers

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 1, pp 120-121 (USSR)

ABSTRACT: This is a summary of a paper presented at the Conference on the Theory of Spectroscopic Instruments (Leningrad, March 5-7, 1959).

The authors and B.S. Neporent (Ref 1) have shown that distortions on scanning of lines and bands of Gaussian form using receiver-recorder systems with exponential rise and decay can be represented uniquely by a parameter K which shows how many times the time-interval required to record a band (Δt) is greater than the time constant of the receiver-recorder system τ:

$$K = \frac{\Delta t}{\tau} = 0.85\frac{b}{v\tau}$$

where b is the band half-width separated out by a monochromator and v is the scanning rate. Representing reduction of the intensities at band maxima by I_{ob}/I (I denotes true intensity and I_{ob} - the observed intensity), band broadening by b_{ob}/b and shift of the maxima by Δ (in cm^{-1}), we find the following simple relationships when $K > 1$:

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Scanning Distortions with Single-Beam Spectrometers

$$(I_{ob}/I) \simeq (b/b_{ob}) \simeq 1 \quad \text{and} \quad \Delta \simeq v\tau.$$

The first of the above expressions shows that the integral intensity is independent of the scanning rate, and the second shows that displacements of the maxima are independent of the band widths (when $K > 1$, i.e. $\Delta t > \tau$). Dependence of the ratios (I_{ob}/I) and (b_{ob}/b) on the parameter K may be given approximately by:

$$(b/b_{ob}) = (I_{ob}/I) = 1 - (2/K^2) \text{ when } 10 < K < \infty,$$

$$(b/b_{cb}) = (I_{ob}/I) = 1.03 - (1/2K) \text{ when } 1 < K < 10.$$

A check of the above formulae, using an IKS-spectrometer, showed that they are in good agreement with experiment. Consequently by taking such values of the ratios (I_{ob}/I) and $b_{ob}/b)$ which ensure the required precision in measurements, the experimenter can determine the corresponding values of the parameter K and the permissible scanning rate from the condition:

$$v = 0.85\frac{b}{\tau K} \approx 0.65\frac{\sqrt{s^2 + b_o^2}}{\tau K} \qquad (1)$$

where s is the effective spectral width of the slits. b_o is the true

Scanning Distortions with Single-Beam Spectrometers

band width. Simultaneously the following energy condition should be fulfilled:

$$s^2 \geqslant s^2_{min} = \frac{M\bar{U}_n}{\sigma CB} \text{ , where } \bar{U}_n \sim \frac{1}{\sqrt{\tau}} \qquad (2)$$

where $\bar{U}_n$ is the noise level at the receiver output (it is inversely proportional to the square root of the time constant of a receiver with "white noise"); σ is the receiver sensitivity; B is the source luminance; C is a constant which represents transmission of the monochromator and its dispersion in the spectral interval s; M is the noise/signal ratio. Expressions (1) and (2) describe fully the relationships between the three main quantities: s, τ and v which determine the experimental conditions at given values of K and M; the latter two parameters represent quantitatively the systematic and random experimental errors. Since the three quantities s, τ and v are related by two conditions (Eqs 1 and 2), then one of these quantities can be selected by the experimenter; then the other two quantities are given uniquely by the conditions (1) and (2). In contrast to τ and v, the choice of s is limited by one more independent condition: the spectral

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Scanning Distortions with Single-Beam Spectrometers

width of the slits s should be smaller than the width of the measured lines or bands (b_o). Even in quantitative measurements it is sufficient to have $s \leqslant \frac{1}{8} b_o$; the optical distortions of the band contour can be then allowed for using methods described by I.V. Peysakhson and D.N. Shchepkin. There is 1 Soviet reference (Uspekhi fiz. nauk, Vol 64, p 447, 1958).

Note. This is a complete translation.

Card 4/4